

DRAFT

Spring Creek Watershed

Priority Geography Public

Land

Dark Hollow Natural Area
Morris Prairie Conservation Area
Shoemaker Conservation Area
Union Ridge Conservation Area

Ten-Year Area Management Plan

FY 2015-2024



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OVERVIEW

The Spring Creek Watershed Priority Geography (Spring Creek Watershed) is a coalescence of the Union Ridge Conservation Opportunity Area (COA), Union Ridge Aquatic COA and a Priority Forest Landscape. At its core, management in the Spring Creek Watershed is about focusing resources in a limited geography to conserve and improve the natural resources. Management of the area relies on public and private partnerships and recognizes the necessity of private landowner cooperation for success. The following document is a ten-year management plan for Dark Hollow Natural Area (NA), Morris Prairie Conservation Area (CA), Shoemaker CA and Union Ridge CA located within the Spring Creek Watershed. These areas represent 18.2 percent (8,510 acres) of the 46,795-acre Spring Creek Watershed Priority Geography, and will demonstrate natural community management practices.

Area Name	Area Number	Year Acquired	Acres	County	Administrative Responsibility	Maintenance Responsibility
Dark Hollow NA	9333	1993	315	Sullivan	Wildlife	Wildlife
Morris Prairie CA	200518	2005	167	Putnam, Sullivan	Wildlife	Wildlife
Shoemaker CA	8927	1989	259	Adair	Forestry	Wildlife
Union Ridge CA	8932	1989	8,111	Adair, Putnam, Sullivan	Wildlife	Wildlife

Statements of Purpose:

A. Strategic Direction

The Missouri Department of Conservation (the Department) manages Dark Hollow NA, Morris Prairie CA, Union Ridge CA and Shoemaker CA to provide diverse habitat for fish, forest and wildlife through sound management practices, while offering the public compatible outdoor recreational opportunities. Special emphasis is placed on prairie, savanna, woodland and forest natural community restoration and enhancement.

B. Desired Future Condition

The desired future condition of Dark Hollow NA, Morris Prairie CA, Union Ridge CA and Shoemaker CA is healthy natural communities including prairie, savanna, woodland and forest.

C. Federal Aid Statement

Dark Hollow NA, Morris Prairie CA and Union Ridge CA were purchased with Department funds. Shoemaker CA was donated by a private individual. There are no federal aid dollars associated with the acquisition of these areas.

GENERAL INFORMATION AND CONDITIONS

I. Special Considerations

Area Name	Priority Areas	Natural Areas
Dark Hollow NA	Yes ¹	Dark Hollow NA
Morris Prairie CA	Yes ²	Morris Prairie NA
Shoemaker CA	Yes ³	None
Union Ridge CA	Yes ⁴	Spring Creek Ranch NA

¹ Spring Creek Watershed Priority Geography, Union Ridge Terrestrial Conservation Opportunity Area (COA), Spring Creek (NE) Fisheries Priority Watershed, Missouri Iowa Woodland Initiative

² Spring Creek Watershed Priority Geogrpahy, Spring Creek (NE) Fisheries Priority Watershed, Priority Forest Landscape, Missouri Iowa Woodland Initiative

³ Spring Creek Watershed Priority Geography, Union Ridge Terrestrial COA, Union Ridge Aquatic COA, Spring Creek (NE) Fisheries Priority Watershed, Priority Forest Landscape, Missouri Iowa Woodland Initiative

⁴ Spring Creek Watershed Priority Geography, Union Ridge Terrestrial COA, Union Ridge Aquatic COA, Spring Creek (NE) Fisheries Priority Watershed, Missouri Iowa Woodland Initiative

II. Important Natural Features and Resources

Area Name	Species of Conservation Concern	Caves	Springs	Other
Dark Hollow NA	Yes ¹	None	None	Yes ^{2,3}
Morris Prairie CA	Yes ¹	None	None	
Shoemaker CA	Yes ¹	None	None	
Union Ridge CA	Yes ¹	None	None	

¹ Species of conservation concern are known from this area. Area Managers should consult the Natural Heritage Database annually and review all management activities with the Natural History Biologist.

² The Spring Creek Watershed has 1,208 acres of rare woodland, savanna, forest and prairie natural communities currently recognized in the Department's Heritage Database, in addition to a warm-water headwater stream. The largest savanna tract in the state occurs within the priority geography.

³ The Spring Creek Watershed contains two of the nine land type associations that are found in the Central Dissected Till Plains; the Unionville Upland Prairie Plain and the Upper Chariton River Woodland/Forest Hills.

III. Existing Infrastructure

Area Name	Concrete Boat Ramp	Privy	Parking Area #	Buildings	Wetland Structures	Lakes/ Ponds
Dark Hollow NA	None	None	1	None	None	None
Morris Prairie CA	None	None	1	1	None	5 ponds (2.5 acres total)
Shoemaker CA	None	None	2	None	None	1 pond (0.1 acre)
Union Ridge CA	1	2	18	2	1	22 ponds (10.4 acres total), 1 lake (11 acre- Union Ridge Lake)

IV. Area Restrictions or Limitations

Area Name	Deed Restrictions	Federal Interest	Ease-ments	Cultural Resources	Hazards	Endangered Species	Boundary Issues
Dark Hollow NA	None	Yes ¹	None	None known	None observed	Yes ⁵	No
Morris Prairie CA	None	Yes ¹	Yes ²	None known	None observed	None observed ⁶	No
Shoemaker CA	None	Yes ¹	Yes ³	None known	None observed	None observed ⁶	No
Union Ridge CA	None	Yes ¹	Yes ⁴	None known	None observed	Yes ⁵	Yes

¹ Federal funds may be used in the management of this land. Fish and wildlife agencies may not allow recreational activities and related facilities that would interfere with the purpose for which the State is managing the land. Other uses may be acceptable and must be assessed in each specific situation.

² Electric and water easements

³ Two right of way easements with the same neighboring landowner

⁴ Sullivan County Public Water Supply District #1 waterline

⁵ Endangered Species are known from this area. Area Managers should consult the Natural Heritage Database annually and review all management activities with the Natural History Biologist.

⁶ Endangered Species are not known from this site, but are found in the surrounding area. Area Managers should consult annually with the Natural History Biologist.

MANAGEMENT CONSIDERATIONS

V. Terrestrial Resource Management Considerations

Dark Hollow NA

Challenges and Opportunities:

- 1) Manage high quality natural communities including savanna, woodland and forest.
- 2) Control of invasive species is a high priority.

Management Objective 1: Enhance woodland and forest communities on the entire area. (Wildlife, Forestry)

Strategy 1: Conduct a forest inventory to determine forest management needs.

Strategy 2: Implement appropriate woodland and forest management activities, as identified in the inventory. Management work may include, but is not limited to, mechanical thinning, herbicide application, forest stand improvement and prescribed burning. The goal of any management practice will be the enhancement of the resources.

Strategy 3: Promote native forbs and improve oak regeneration with prescribed fire.

Management Objective 2: Actively monitor and control invasive and exotic species. (Wildlife, Forestry)

Strategy 1: Monitor for invasive and exotic species.

Strategy 2: Control invasive and exotic species through a variety of techniques, including, but not limited to, chemical application, mechanical thinning and prescribed fire.

Management Objective 3: Control or set back woody species encroachment on savanna restoration. (Wildlife)

Strategy 1: Use timely prescribed fire to set back woody encroachment.

Strategy 2: Mechanically control woody encroachment.

Strategy 3: Use chemical application to control woody encroachment while not harming desirable plants.

Management Objective 4: Monitor and manage for species of conservation concern. (Wildlife)

Strategy 1: Conduct annual surveys for species of conservation concern.

Strategy 2: Manage for species of conservation concern found during annual surveys.

Morris Prairie CA

Challenges and Opportunities:

- 1) Manage high quality natural communities including woodland and prairie.
- 2) Control of invasive species is a high priority.

Management Objective 1: Enhance woodland and prairie communities on the entire area. (Wildlife)

Strategy 1: Restore and promote native prairie with supplementary plantings of native grasses and forbs.

Strategy 2: Promote native plants and control invasive and exotic species utilizing prescribed fire.

Management Objective 2: Actively control invasive and exotic species. (Wildlife)

Strategy 1: Monitor for invasive and exotic species.

Strategy 2: Control invasive and exotic species through a variety of techniques, including, but not limited to, chemical application, mechanical thinning and prescribed fire.

Management Objective 3: Control or set back woody encroachment in grassland area. (Wildlife)

Strategy 1: Use timely prescribed fire to set back woody encroachment.

Strategy 2: Mechanically control woody encroachment.

Strategy 3: Use chemical application to control woody encroachment while not harming desirable plants.

Management Objective 4: Monitor and manage for species of conservation concern. (Wildlife)

Strategy 1: Conduct annual surveys for species of conservation concern.

Strategy 2: Manage for species of conservation concern found during annual surveys.

Shoemaker CA

Challenges and Opportunities:

- 1) Manage as a high quality even aged, oak/hickory forest.
- 2) Control of invasive and exotic species is a high priority.

Management Objective 1: Enhance forest communities. (Forestry)

Strategy 1: Conduct a forest inventory to determine forest management needs.

Strategy 2: Implement appropriate woodland and forest management activities, as identified in the inventory. Management work may include, but is not limited to, timber sales, herbicide application, forest stand improvement and prescribed burning. The goal of any management practice will be the enhancement of the resources.

Strategy 3: Re-inventory in fiscal year (FY) 2024.

Management Objective 2: Monitor and control invasive and exotic species.
(Forestry)

Strategy 1: Monitor for invasive and exotic species.

Strategy 2: Control invasive and exotic species through a variety of techniques, including, but not limited to, chemical application, mechanical thinning and prescribed fire.

Union Ridge CA

Challenges and Opportunities:

- 1) Manage high quality woodland, savanna and forest natural communities including Spring Creek Ranch NA.
- 2) Control of invasive and exotic species is a high priority.
- 3) Provide high quality outdoor recreational opportunities for a wide range of stakeholders.

Management Objective 1: Manage and enhance Spring Creek Ranch NA as the premier savanna landscape in the state. (Wildlife)

Strategy 1: Continue an aggressive prescribed fire regime.

Strategy 2: Complete savanna tree thinning and timber stand improvement on the eastern portions of Spring Creek Ranch NA.

Strategy 3: Plant native forbs and grasses on rough areas including old crop fields and historically heavily grazed areas.

Management Objective 2: Enhance woodland and forest communities. (Wildlife, Forestry)

Strategy 1: Conduct forest inventory to determine forest management needs.

- Conduct Compartment 3 inventory by FY2015.
- Conduct Compartment 5 inventory by FY2017.
- Conduct Compartment 4 inventory by FY2018.
- Conduct Compartment 7 inventory by FY2019.
- Conduct Compartment 1 inventory by FY2022.

Strategy 2: Implement management prescriptions of the forest inventory within five years of the inventory completion, with priority given to the stands that will meet the management emphasis of the conservation area.

Strategy 3: Follow the appropriate best management practices outlined in *Missouri Watershed Protection Practice Recommended Practices for Missouri Forests* (2014) when conducting silvicultural operations.

Strategy 4: Follow *Watershed and Stream Management Guidelines for Land and Waters Managed by the Missouri Department of Conservation* (Missouri Department of Conservation, 2009), as appropriate.

Management Objective 3: Enhance and expand woodland acres on Union Ridge CA. (Wildlife, Forestry)

Strategy 1: Continue aggressive prescribed fire regime. Use of prescribed fire will decrease in frequency once floral composition is at a desired state.

Strategy 2: Based on the forest inventory, expand woodland units to Compartment 3 and Compartment 4 in locations supported by site and vegetative conditions. Expansion will be accomplished by using a variety of management techniques, including, but not limited to, woodland improvement and prescribed fire management practices.

Management Objective 4: Provide cereal grain and green browse food plots to enhance small and large game habitat. (Wildlife)

Strategy 1: Continue to work with a permittee farmer to ensure that a mixture of food is available for wildlife and to ensure that best management practices are being implemented.

Strategy 2: Plant cover crop mixes in sunflower fields annually.

Strategy 3: Maintain crop land through Ag Crop program and Department planted foodplots.

Strategy 4: Annually disk or leave idle the previous year's food plots on open fields to provide early successional habitat.

Management Objective 5: Manage the old fields not in agricultural program to provide early successional habitat. (Wildlife)

Strategy 1: Remove undesirable woody vegetation from old fields not in agricultural program and create downed woody cover.

Management Objective 6: Opportunistically manage available shallow water wetland resources. (Wildlife)

Strategy 1: Control woody invasion and reed canary grass in the wetland unit.

Strategy 2: Promote early successional wetland plant species by disking when conditions allow.

Strategy 3: Investigate feasibility of increasing surface water input into the wetland unit.

Management Objective 7: Actively monitor and control invasive and exotic species. (Wildlife, Forestry)

Strategy 1: Monitor for invasive and exotic species.

Strategy 2: Control invasive and exotic species through a variety of techniques, including, but not limited to, chemical application, mechanical thinning and prescribed fire.

Strategy 3: Manipulate water levels in wetland pool to control reed canary grass.

Management Objective 8: Monitor and manage for species of conservation concern. (Wildlife)

Strategy 1: Conduct annual surveys for species of conservation concern.

Strategy 2: Manage for species of conservation concern found during annual surveys.

VI. Aquatic Resource Management Considerations

Dark Hollow NA

Challenges and Opportunities:

- 1) Maintain stream water quality to support a healthy ecosystem.

Management Objective 1: Improve long-term stream stability and ecological function on Dark Hollow NA according to Department guidelines (Missouri Department of Conservation, 2009). (Wildlife)

Strategy 1: Maintain or widen, if appropriate, the existing minimum 50-foot wide, wooded riparian corridor on all lands bordering the streams on Dark Hollow NA.

Morris Prairie CA

Challenges and Opportunities:

- 1) Maintain fishing opportunities for future generations.
- 2) Maintain water quality of the streams and ponds to support a healthy ecosystem.

Management Objective 1: Maintain self-sustaining largemouth bass and bluegill fisheries in Pond 1 and Pond 2. (Fisheries)

Strategy 1: Control excessive aquatic macrophytes chemically or biologically to promote efficient foraging by largemouth bass.

Strategy 2: Opportunistically survey Ponds 1 and 2 every 5 to 10 years and evaluate fish communities beginning in FY2016.

Management Objective 2: In fishless ponds and ponds lacking viable fish populations, provide suitable habitat for amphibians and reptiles. (Fisheries)

Strategy 1: Maintain current conditions in fishless ponds and do not stock ponds with fish.

Strategy 2: Explore the feasibility of chemically removing fish from ponds lacking viable fish populations, and, if feasible, chemically remove fish by FY2016.

Management Objective 3: Improve long-term stream stability and ecological function on Morris Prairie CA according to Department guidelines (Missouri Department of Conservation, 2009). (Wildlife)

Strategy 1: Maintain a minimum 50-foot wide riparian corridor in native vegetation on all lands bordering the streams on Morris Prairie CA.

Strategy 2: Inspect all stream crossings by FY2017 to ensure they meet design specifications for light equipment crossings. Crossings that do not meet specifications should be eliminated or corrected through the budget process by FY2018.

Shoemaker CA

Challenges and Opportunities:

- 1) Maintain fishing opportunities for future generations.
- 2) Maintain water quality of the streams and pond to support a healthy ecosystem.

Management Objective 1: In the fishless pond, provide suitable habitat for amphibians and reptiles. (Fisheries)

Strategy 1: Maintain current conditions in the fishless pond and do not stock pond with fish.

Management Objective 2: Improve long-term stream stability and ecological function of Spring Creek on Shoemaker CA according to Department guidelines (Missouri Department of Conservation, 2009). (Forestry)

Strategy 1: Maintain a minimum 200-foot wide, wooded riparian corridor on all lands bordering Spring Creek.

Union Ridge CA

Challenges and Opportunities:

- 1) Maintain fishing opportunities for future generations.
- 2) Maintain water quality of the streams and ponds to support a healthy ecosystem.
- 3) Monitor and manage an experimental population of Topeka shiners to Spring Creek Watershed.

Management Objective 1: Maintain self-sustaining largemouth bass and bluegill fisheries in Union Ridge Lake, Pond 1 and Pond 2. (Fisheries)

Strategy 1: Control excessive aquatic macrophytes chemically or biologically to promote efficient foraging by largemouth bass.

Strategy 2: Survey and evaluate Union Ridge Lake fish community every three to five years beginning in FY2017.

Strategy 3: Opportunistically survey Ponds 1 and 2 every 5 to 10 years and evaluate fish communities beginning in FY2017.

Management Objective 2: Maintain a put-grow-and-take fishery for channel catfish in Union Ridge Lake. (Fisheries)

Strategy 1: Stock Union Ridge Lake with 8- to 10-inch channel catfish every other year beginning in FY2016.

Management Objective 3: Manage designated Topeka shiner brood ponds according to *Topeka Shiner Recovery Plan* (Missouri Department of Conservation, 2010). (Fisheries)

Strategy 1: Maintain fishless condition according to the *Topeka Shiner Recovery Plan*.

Strategy 2: Stock orange-spotted sunfish and Topeka shiners in brood ponds at rates determined by the *Topeka Shiner Recovery Plan*.

Strategy 3: Explore the feasibility of constructing off-channel, brood rearing habitat adjacent to area streams by FY2018.

Management Objective 4: In fishless ponds and ponds lacking viable fish populations, provide suitable habitat for amphibians and reptiles. (Fisheries)

Strategy 1: Maintain current conditions in fishless ponds and do not stock ponds with fish.

Strategy 2: Explore the feasibility of chemically removing fish from ponds lacking viable fish populations, and, if feasible, chemically remove fish by FY2018.

Management Objective 5: Improve long-term stream stability and ecological function of Spring Creek and its tributaries on Union Ridge CA according to Department guidelines (Missouri Department of Conservation, 2009). (Wildlife/Fisheries)

Strategy 1: Maintain and monitor a minimum 200-foot wide, wooded riparian corridor on all lands bordering Spring Creek.

Strategy 2: Maintain and monitor a minimum 100-foot wide, vegetated riparian corridor on all lands bordering Spring Creek tributaries on Union Ridge CA.

Strategy 3: Inspect all stream crossings by FY2017 to ensure they meet design specifications for light equipment crossings. Crossings that do not meet specifications should be eliminated or corrected through the budget process by FY2019.

VII. Public Use Management Considerations for All Areas

Challenges and Opportunities:

- 1) Maintain current infrastructure.
- 2) Improve access to fishable ponds.
- 3) Enforce statewide and area specific regulations.

Management Objective 1: Maintain current infrastructure to established maintenance standards to invite public use and keep area users informed of regulations. (Wildlife, Forestry)

Strategy 1: Keep area brochure on bulletin board and map box stocked at area parking lots.

Strategy 2: Maintain current levels of area maintenance. Keep field roads mowed to improve area access.

Management Objective 2: Provide improved pond-fishing access for the public on all areas with stocked ponds. (Wildlife, Forestry)

Strategy 1: Ensure field trails leading to fishing ponds and dams are mowed according to area maintenance standards.

Management Objective 3: Ensure statewide and area specific regulations are enforced and provide citizens a safe environment for outdoor recreational use. (Protection)

Strategy 1: Enforce 10 p.m. to 4 a.m. closure regulation.

Strategy 2: Through personal contacts, invoke the help of neighbors in observing and reporting unauthorized use of the area.

Union Ridge CA

Challenges and Opportunities:

- 1) Provide outdoor recreational opportunities.

Management Objective 1: Provide outdoor recreational opportunities for stakeholders to participate on Union Ridge CA. (Wildlife)

Strategy 1: Annually consider providing a managed deer hunt during the antlerless-only season.

Strategy 2: Allow horseback riding according to the Wildlife Code on field roads north of Highway D by Special Use Permit.

VIII. Administrative Considerations

Lands Proposed for Acquisition:

When available, inholdings and/or adjacent land may be considered for acquisition from willing sellers. Tracts that improve area access, provide public use opportunities, contain unique natural communities and/or species of conservation concern, or meet other Department priorities, as identified in the annual Department land acquisition priorities, may be considered.

[illegible]

Union Ridge CA:

	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
Terrestrial Resource Management										
<i>Objective 1</i>										
Strategy 2	X	X	X	X						
<i>Objective 2</i>										
Strategy 1	X		X	X	X			X		
Strategy 3				X						
<i>Objective 3</i>										
Strategy 1		X	X	X	X	X	X	X	X	X
<i>Objective 9</i>										
Strategy 1	X					X				
Aquatic Resource Management										
<i>Objective 1</i>										
Strategy 2			X			X			X	
Strategy 3			X					X		
<i>Objective 2</i>										
Strategy 1		X		X		X		X		X
<i>Objective 3</i>										
Strategy 3				X						
<i>Objective 4</i>										
Strategy 2				X						
<i>Objective 5</i>										
Strategy 3			X		X					

APPENDICES

References:

Missouri Department of Conservation. (1995). *Shoemaker Conservation Area limited area plan*.

Missouri Department of Conservation. (1998). *Union Ridge Conservation Area and Dark Hollow Natural Area plan*.

Missouri Department of Conservation. (2005). *Forest management plan Shoemaker CA*.

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Missouri Department of Conservation. (n.d.). *Natural Heritage Database*. Jefferson City, Missouri.

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Nelson, P. W. (2010). *The terrestrial natural communities of Missouri*. Jefferson City, Missouri: Missouri Natural Areas Committee.

Appendices:

Appendix 1. Conservation Areas within Spring Creek Watershed Priority Geography.

Appendix 2. Dark Hollow Natural Area Background

Appendix 3. Map of Dark Hollow Natural Area

Appendix 4. Cover Type Map of Dark Hollow Natural Area

Appendix 5. Morris Prairie Conservation Area Background

Appendix 6. Map of Morris Prairie Conservation Area

Appendix 7. Cover Type Map of Morris Prairie Conservation Area

Appendix 8. Shoemaker Conservation Area Background

Appendix 9. Map of Shoemaker Conservation Area

Appendix 10. Cover Type Map of Shoemaker Conservation Area

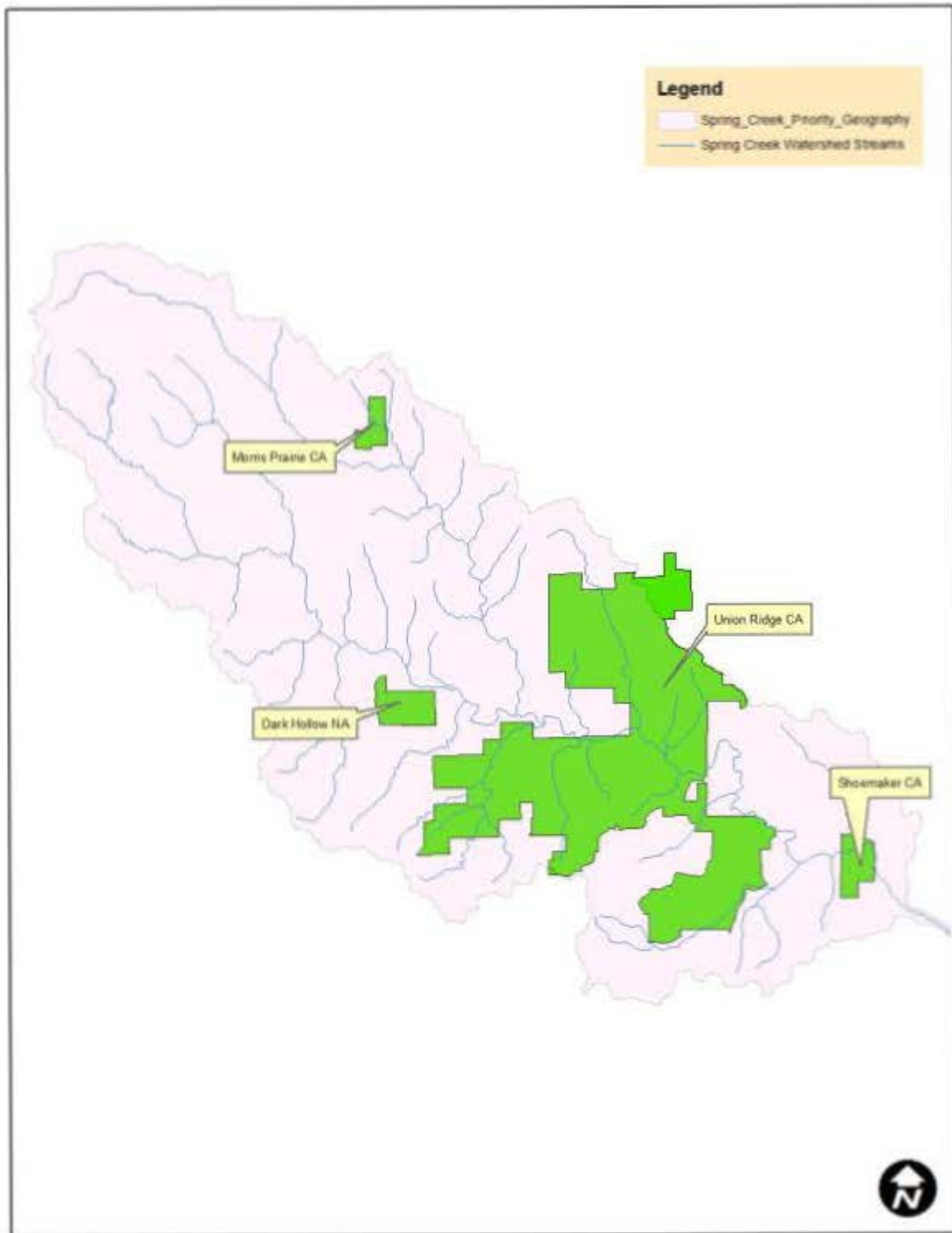
Appendix 11. Union Ridge Conservation Area Background

Appendix 12. Map of Union Ridge Conservation Area

Appendix 13. Cover Type Map of Union Ridge Conservation Area

Appendix 14. Union Ridge Conservation Area Forestry Compartments

Appendix 1. Conservation Areas within Spring Creek Watershed Priority Geography.



Appendix 2. Dark Hollow Natural Area Background

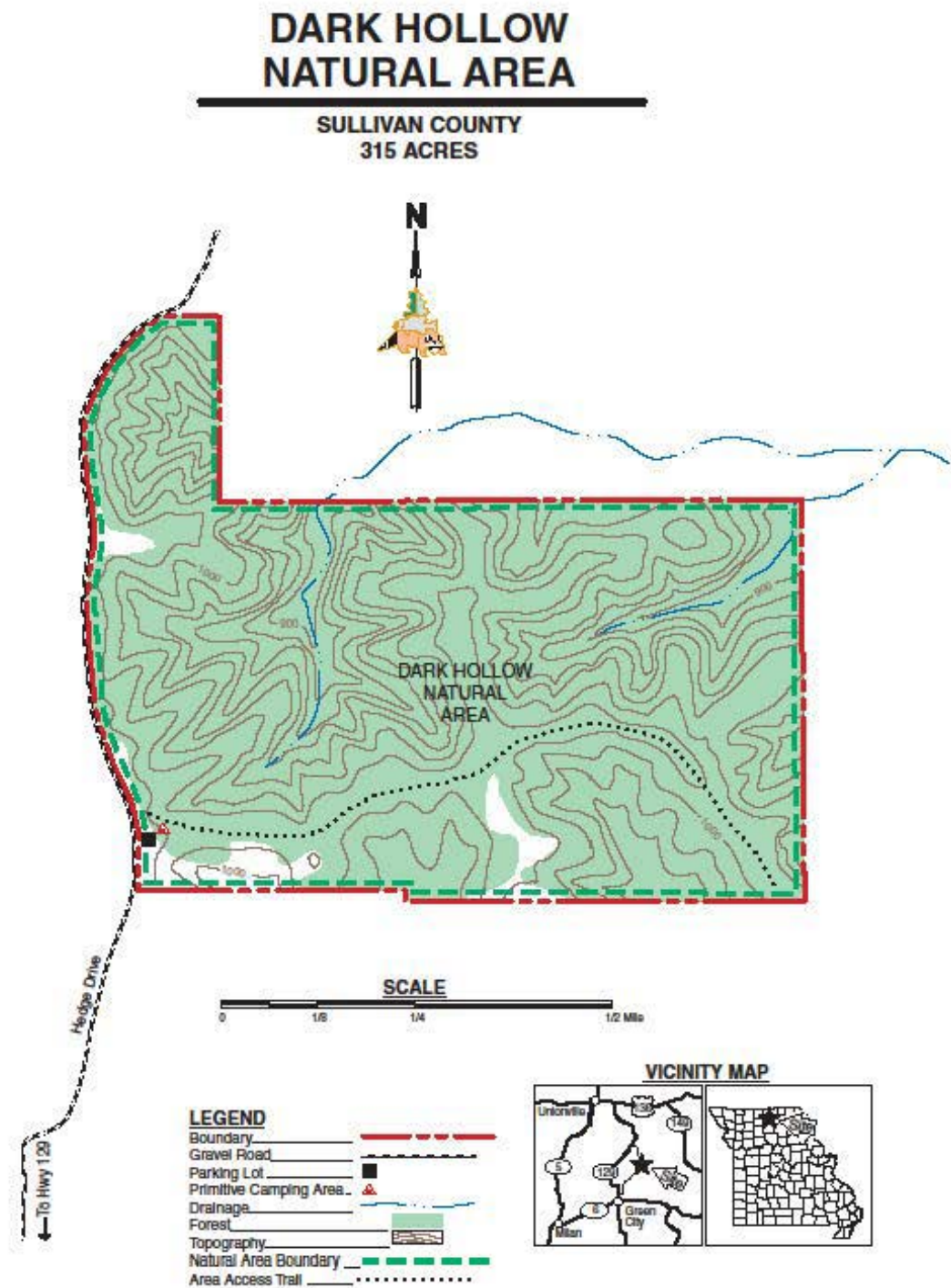
Dark Hollow NA is located approximately 4 miles north of Green City, Missouri in Sullivan County. The area was purchased in 1989 and was considered part of Union Ridge CA until 1993. An additional 22 acres were added in 1994.

Dark Hollow NA is managed primarily for its natural communities. Botanist Julian Steyermark, author of the first edition of *Flora of Missouri*, recognized this site as having value for its varied plant life in 1954. This area was historically a transition zone between savannas and prairies to the south, and forests on the hills and bottoms along Spring Creek to the north.

Current Land and Water Types:

Land/Water Type	Acres	% of Area
Woodland	202	64
Forest	87	28
Savanna	26	8
Total	315	100

Appendix 3. Map of Dark Hollow Natural Area



Appendix 4. Cover Type Map of Dark Hollow Natural Area



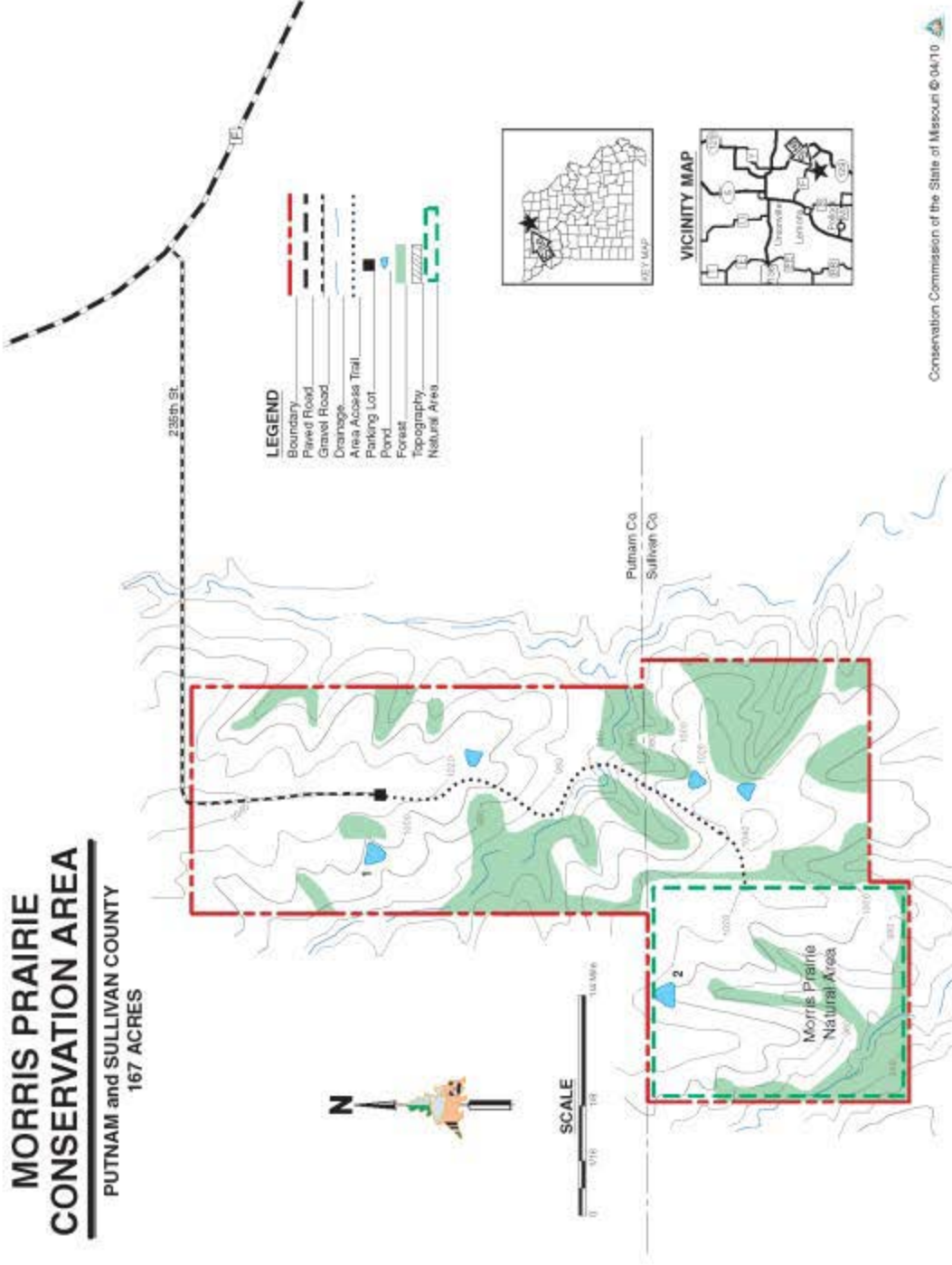
Appendix 5. Morris Prairie Conservation Area Background

Morris Prairie CA is located approximately 10 miles southeast of Unionville, Missouri in Putnam and Sullivan counties. The area was purchased in 2005 and contains the 47-acre Morris Prairie Natural Area located in the southwest corner of the Area.

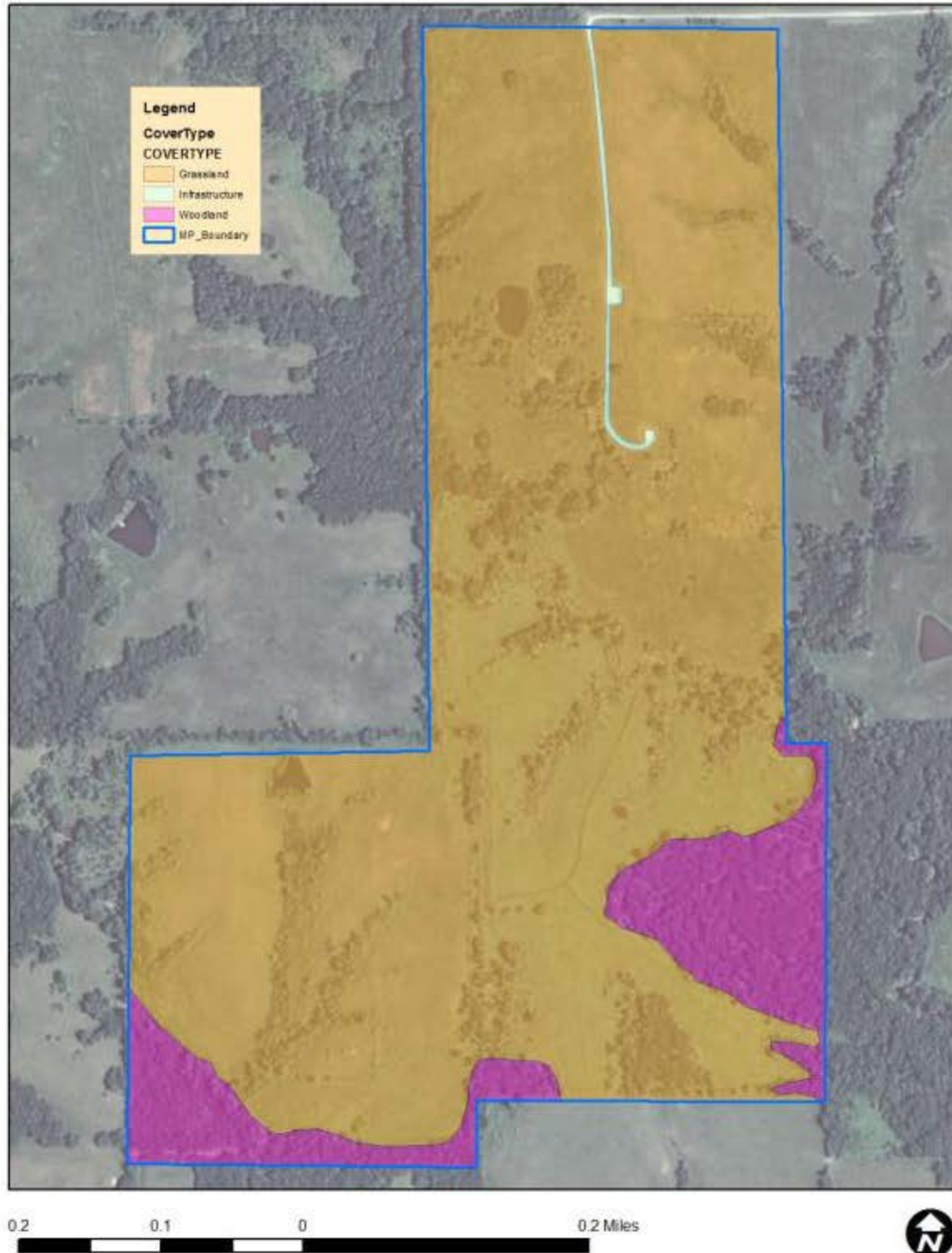
Current Land and Water Types:

Land/Water Type	Acres	% of Area
Grassland	145.6	87
Woodland	18.7	11
Other	2.7	2
Total	167	100

Appendix 6. Map of Morris Prairie Conservation Area



Appendix 7. Cover Type Map of Morris Prairie Conservation Area



Appendix 8. Shoemaker Conservation Area Background

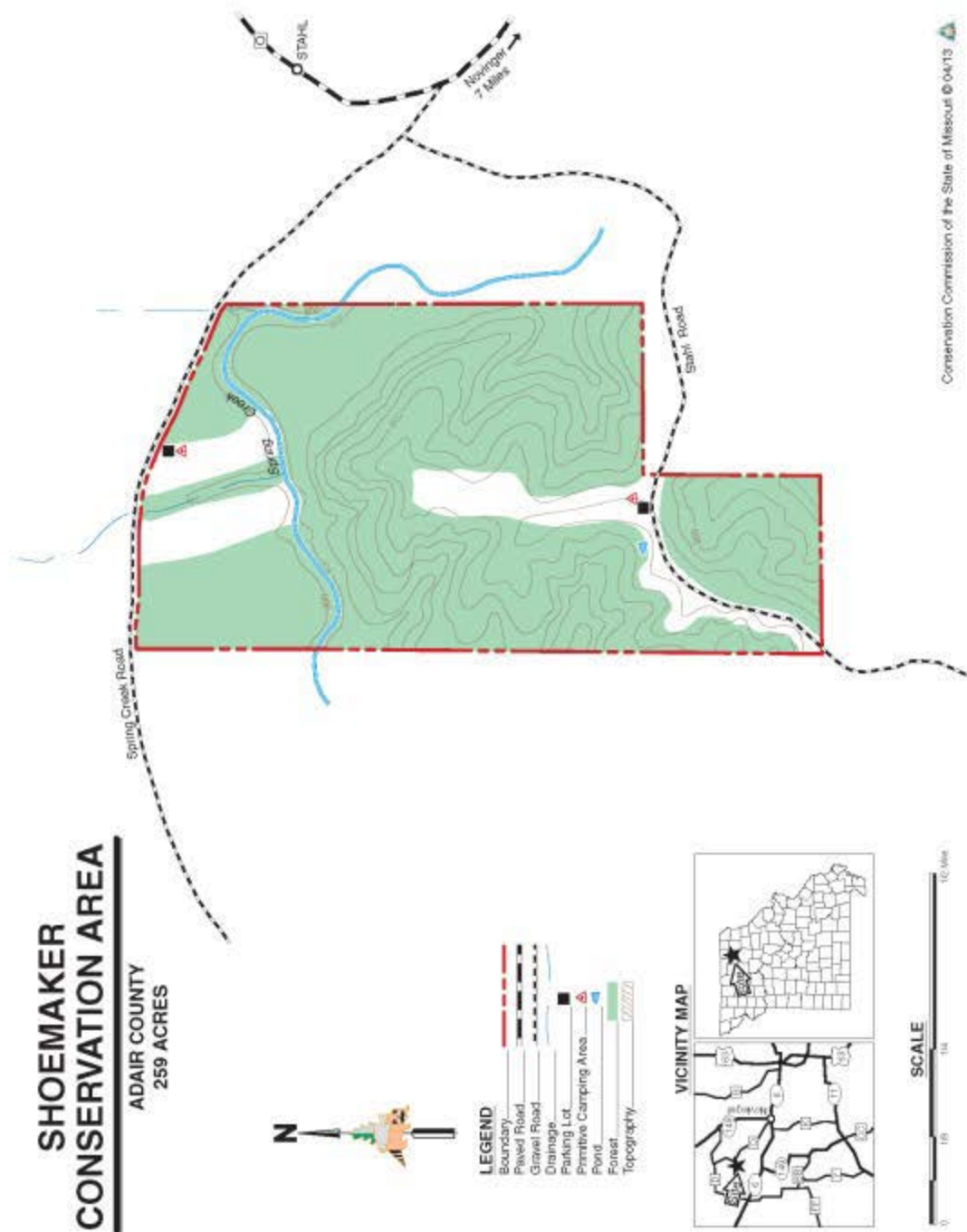
Shoemaker CA is located 7 miles north of Novinger, Missouri in Adair County. The area was donated in 1989 by Elizabeth H. Shafer and named after her first husband's surname. An additional 59 acres were purchased in 2008 to improve access to Spring Creek.

The area is characterized by oak-hickory wooded hills with narrow ridges. Spring Creek cuts through the northern portion of the area.

Current Land and Water Types:

Land/Water Type	Acres	Miles	% of Area
Forest	169		65
Woodland	49		19
Old Field	27.5		11
Stream Channel	12.5		4
Other	1		1
Total	259		100
Stream Frontage		1.0	

Appendix 9. Map of Shoemaker Conservation Area



Appendix 10. Cover Type Map of Shoemaker Conservation Area



Appendix 11. Union Ridge Conservation Area Background

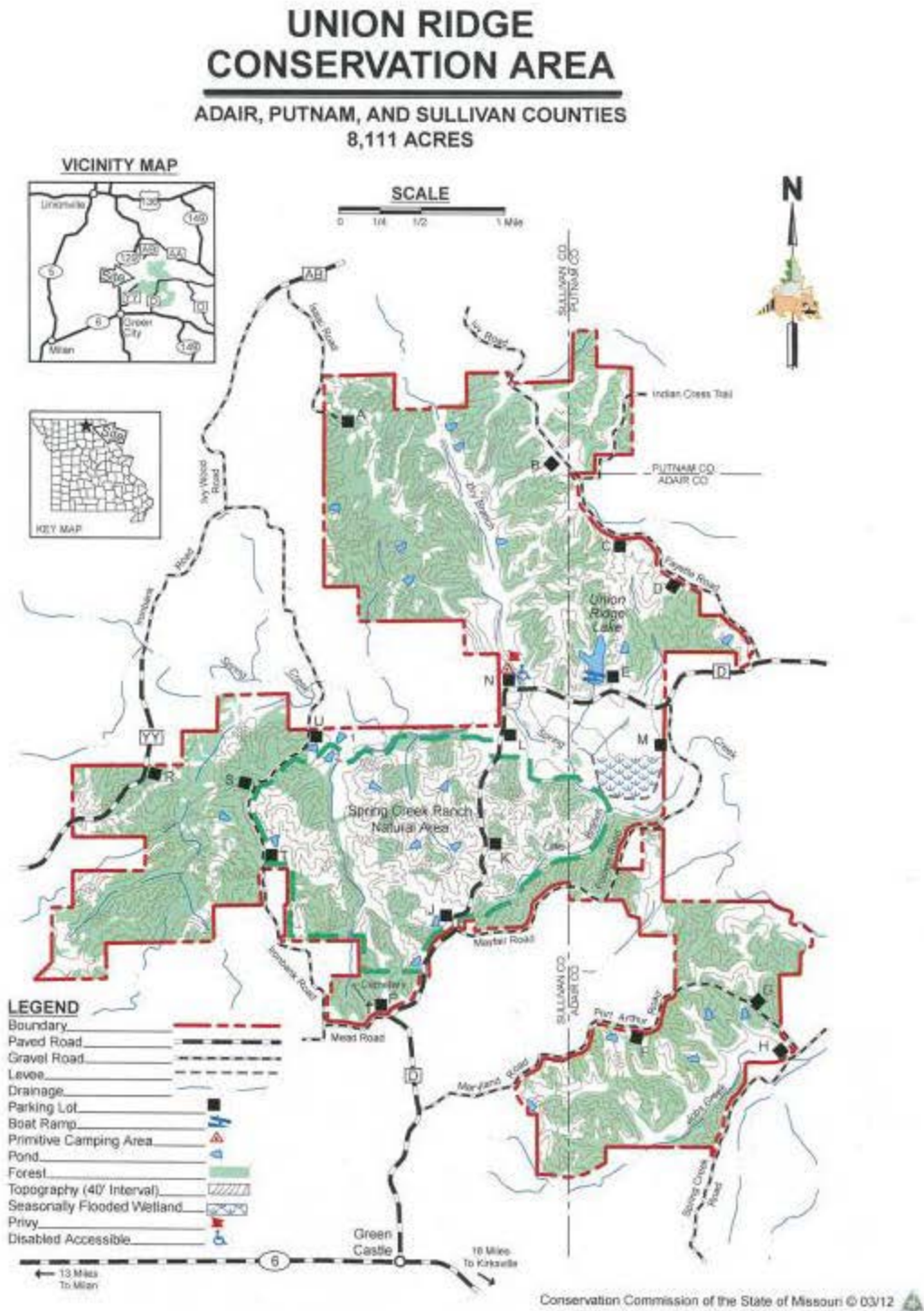
Union Ridge CA is located 2 miles north of Green Castle, Missouri in Adair, Putnam and Sullivan counties. This conservation area was created in 1989, when the Department purchased the bulk of the property from Mutual Assurance of New York. The area had mainly been used for cattle ranching and was known locally as Henley Ranch and later as Spring Creek Ranch.

A 1,769-acre portion of the area has been designated as the Spring Creek Ranch Natural Area. This area is being managed to restore prairie and savanna communities and is located in the south-central portion of the area.

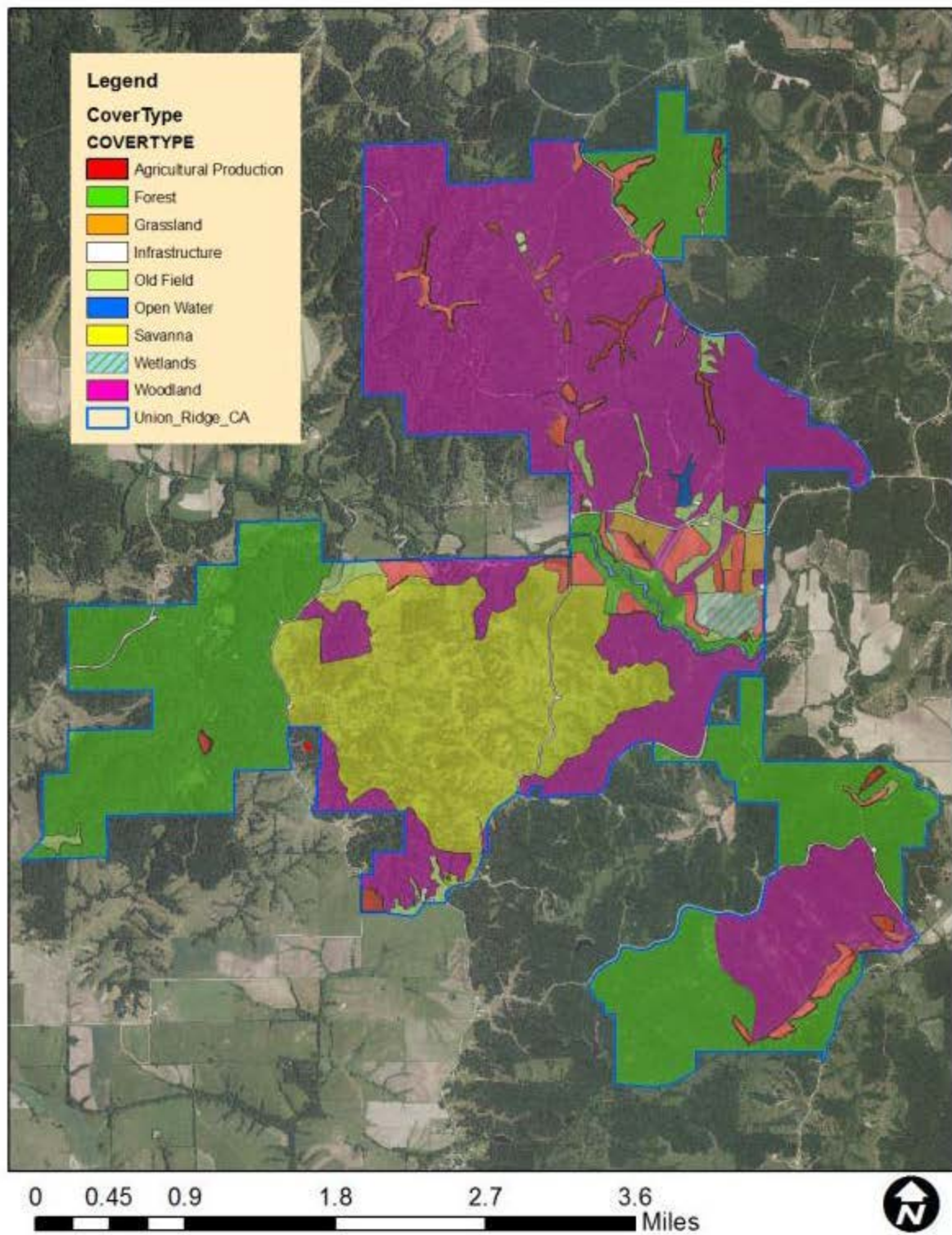
Current Land and Water Types:

Land/Water Type	Acres	Miles	% of Area
Woodland	3,447		42
Forest	2,462		30
Savanna	1,479		18
Agriculture	397		5
Old Field	175		2
Grassland	60		1
Wetland	55		1
Open Water	36		1
Total	8,111		100
Stream Frontage		1.75	

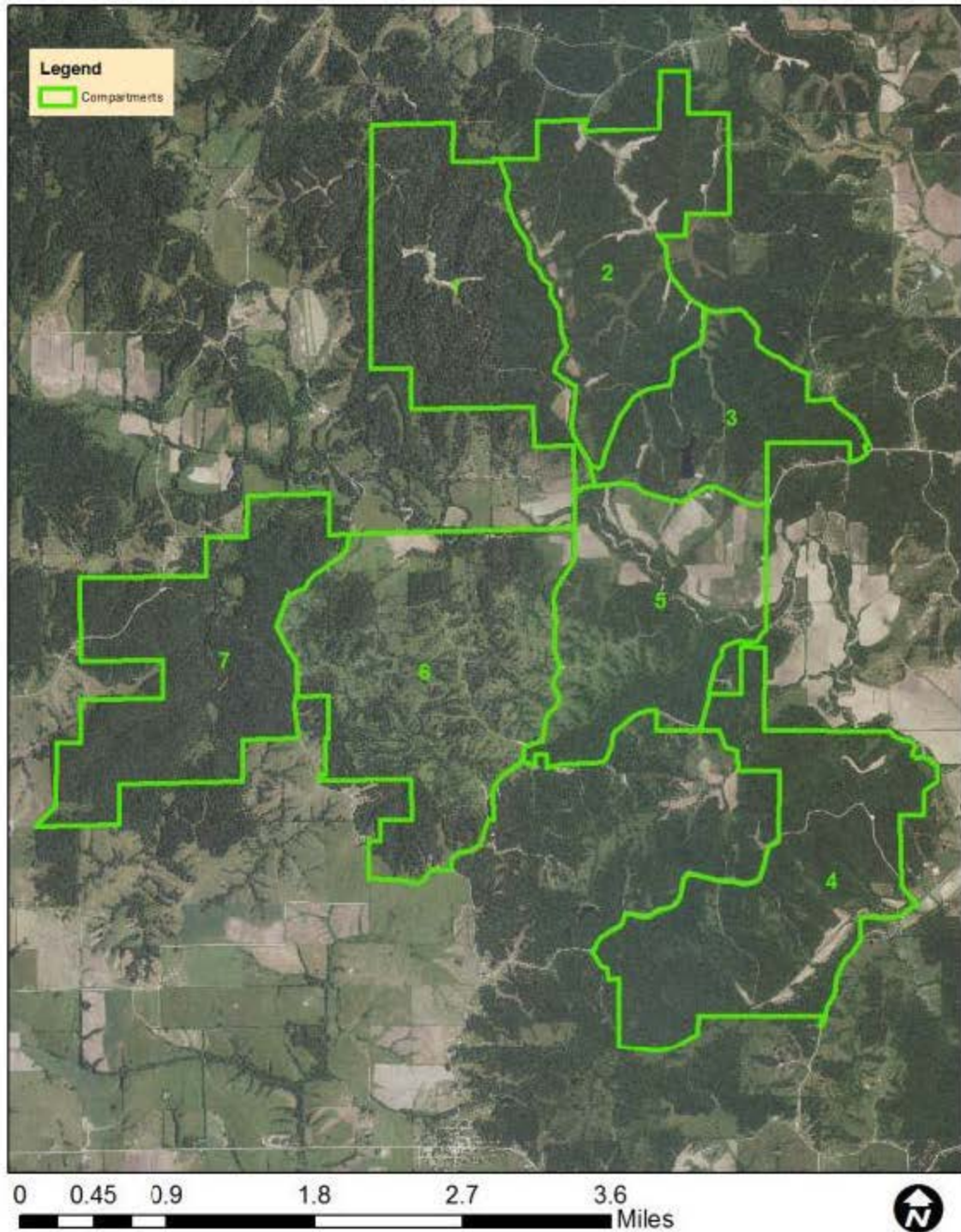
Appendix 12. Map of Union Ridge Conservation Area



Appendix 13. Cover Type Map of Union Ridge Conservation Area



Appendix 14. Union Ridge Conservation Area Forestry Compartments



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